

What is claimed is:

1. A valve for controlling material flow through a catheter, comprising:

a first flexible member including a first moveable element, wherein, when the first moveable element is in the open position, material may flow past the first flexible member through a first lumen of the catheter and, when the first moveable element is in the closed position, flow through the first lumen is prevented; and

a first biasing member coupled to the first flexible member for biasing the first moveable member toward the closed position.

2. The valve according to claim 1, wherein the first flexible member is formed as a sheet of polymeric material.

3. The valve according to claim 2, wherein the first flexible member further comprises a second movable element, the first and second moveable elements being formed as flaps of the sheet of polymeric material separated by a first slit therein.

4. The valve according to claim 3, wherein the first slit is substantially linear.

5. The valve according to claim 4, wherein the first biasing member extends around the first slit.

6. The valve according to claim 5, wherein the first biasing member is substantially rectangular.

7. The valve according to claim 2, wherein the first biasing member is formed of a wire embedded within the first flexible member.

8. The valve according to claim 4, wherein the flexible member is formed substantially as a disc and where the first slit extends substantially parallel to a major axis of the disc.

9. The valve according to claim 1, further comprising:

a housing in which the first flexible member is mounted, the housing comprising first and second lumens, the first flexible member being mounted within the first lumen and a second flexible member being mounted within the second lumen, the second flexible member including a third moveable element, wherein, when the third moveable element is in the open position, material may flow past the second flexible member through the second and, when the third moveable element is in the closed position, flow through the second lumen is prevented; and

a second biasing member coupled to the second flexible member for biasing the first moveable member toward the closed position.

10. The valve according to claim 2, wherein the first and second movable elements are resilient flaps separated by first and second substantially parallel slits.

11. The valve according to claim 9, wherein the housing is adapted to couple to a first external line to the first lumen for supplying blood to a dialysis machine and to couple the second lumen to a second external line for receiving blood from the dialysis machine.

12. The valve according to claim 9, wherein the housing is a unitary part of the catheter.

13. The valve according to claim 3, wherein the first and second movable elements move between the open and closed positions in response to pressures applied thereto via the first lumen.

14. The valve according to claim 13, wherein the first and second movable elements are biased by the biasing member so that, when acted upon by a pressure less than a threshold value, they remain in the closed position.

15. The valve according to claim 2, wherein the first flexible member is formed as a silicone disc.

16. A valve housing for a catheter comprising:

a first end permanently coupled to a patient line a distal end of which is to be implanted within a patient's body and a second end connectable to an external line;

a housing flow passage fluidly coupled to a flow passage of the patient line and selectively coupleable to a flow passage of the external line; and

a valve mounted within the housing flow passage to selectively restrict flow of materials therethrough, the valve including:

a moveable portion defined by a first slit in the valve, the moveable portion being adapted to open when a pressure applied to the valve is at least a threshold pressure and to remain closed when the pressure applied thereto is less than the threshold pressure; and

a first biasing member coupled to the valve, the biasing member biasing the moveable portion to the closed position.

17. The valve housing according to claim 16, wherein the valve comprises a flexible disk disposed in the housing flow passage.

18. The valve housing according to claim 17, wherein the first biasing member is embedded within the flexible disc.

19. The valve housing according to claim 18, wherein the first biasing member is formed of at least one length of wire.

20. The valve housing according to claim 19, wherein the at least one length of wire extends around the first slit.

21. The valve housing according to claim 20, wherein the at least one length of wire comprises a plurality of unjoined wire segments.

22. The valve housing according to claim 18, further comprising a second biasing member, the first biasing member extending substantially parallel to the first slit on a first side thereof and the second biasing member extending substantially parallel to the first slit on a second side thereof opposite the first biasing member.

23. The valve housing according to claim 22, further comprising at least one third biasing member extending substantially perpendicular to the first slit and separated from an end of the first slit.

24. The valve housing according to claim 23, wherein the at least one third biasing member includes a pair of third biasing members extending adjacent to opposite ends of the first slit.

25. The valve housing according to claim 24, further comprising a pair of second slits extending substantially perpendicular to the first slit at opposite ends thereof to form an H-shaped arrangement of slits, wherein the third biasing members are radially outside the second slits with respect to the first slit.

26. The valve housing according to claim 20, further comprising a second slit extending substantially parallel to the first slit within the first biasing member.

27. The valve housing according to claim 16, further comprising a pair of second slits, each of the second slits extending away from a first end of the first slit at a predetermined angle and a pair of third slits, each of the third slits extending away from a second end of the first slit opposite the first end at a predetermined angle.

28. The valve housing according to claim 27, wherein the valve is formed as a sheet of flexible material and wherein the first biasing member comprises a wire embedded within the sheet of flexible material, the first biasing member extending around the first second and third slits.